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10/665,277	09/19/2003	Peter Renzi	109782.0003	5464
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ROETZEL & ANDRESS 1375 EAST 9TH STREET CLEVELAND, OH 44114			EXAMINER CHIO, TAT CHI	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/665,277

Applicant(s)

RENZI ET AL.

Examiner

Tat Chi Chio

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u>                                    | 6) <input type="checkbox"/> Other: ____                           |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :9/19/2003, 11/3/2003, and 3/9/2004.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 15 is objected to because of the following informalities: "the optical recording device" should be "optical storage device". Appropriate correction is required.
2. Claim 27 is objected to because of the following informalities: "the first" should be "the first memory". Appropriate correction is required.
3. Claim 42 is objected to because of the following informalities: claim 42 should not be dependent on claim 20 because claim 20 claims a digital recording system while claim 42 claims a method. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 13 recites the limitation "hard disk". There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4-12, 14-20, 22, 24-27, 29-31, 33, 35, 39-41, and 43-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Kikuchi et al. (US 6,553,180 B1).

**Consider claim 1**, Kikuchi et al. teach a digital recording system comprising: a video recording device to receive (42 of Fig. 39 and col. 27, lines 20-21) and encode video image data (encoder 50 of Fig. 39); a video recorder object which controls and monitors operations of the video recording device (30 of Fig. 39); a first memory for receiving image data from the video recording device (34 of Fig. 39); a streaming object operative to stream the image data from the first memory to a digital storage device (30 of Fig. 39).

**Consider claim 4**, Kikuchi et al. teach the digital recording system wherein image data is received by the first memory during a streaming buffer delay during which image data is not streamed to the digital storage device (col. 34, lines 1-20).

**Consider claim 5**, Kikuchi et al. teach the digital recording system wherein image data is streamed to the digital storage device by the streaming object while the first memory is not receiving image data from the video recorder (col. 34, lines 1-20).

**Consider claim 6**, Kikuchi et al. teach the digital recording system, wherein the image data is received by the first memory as data blocks (col. 34, lines 1-20, the image data is received by the temporal storage as data blocks of the predetermined size that the temporal storage is able to hold).

**Consider claim 7**, Kikuchi et al. teach the digital recording system wherein the data blocks are encoded video frames (col. 15, lines 20-26).

**Consider claim 8**, Kikuchi et al. teach the digital recording system wherein the streaming object is operative to check available storage space in the digital storage device prior to streaming image data to the digital storage device (Fig. 49 and Fig. 51).

**Consider claim 9**, Kikuchi et al. teach the digital recording system wherein the video recorder captures image data as one or more standards consisting of the group of MPEG-2, MPEG-4, WMV, and digital video (col. 27, lines 18-27 video recorder captures digital video).

**Consider claim 10**, Kikuchi et al. teach the digital recording system further comprising a memory controller to control the recording of image data in the first memory (30 of Fig. 39).

**Consider claim 11**, Kikuchi et al. teach the digital recording system wherein the first memory comprises random access memory (col. 34, lines 6-16).

**Consider claim 12**, Kikuchi et al. teach the digital recording system wherein the first memory comprises a hard disk (col. 34, lines 6-16).

**Consider claim 14**, Kikuchi et al. teach the digital recoding system wherein the digital storage device is an optical storage device (10 and 32 of Fig. 39).

**Consider claim 15**, Kikuchi et al. teach the digital recording system wherein the optical recording is one of a compact disk (CD) storage device and a digital video disk (DVD) storage device (10 and 32 of Fig. 39).

**Consider claim 16,** Kikuchi et al. teach the digital recording system wherein the digital storage device is one of a network and network connected storage device (10 and 32 of Fig. 39 is connected to the network comprising encoder 50, decoder 60, and other components shown in Fig. 39. Therefore, it is network connected storage device).

**Consider claim 17,** Kikuchi et al. teach the digital recording system wherein the streaming object is embodied in software (col. 34, lines 49-52).

**Consider claim 18,** Kikuchi et al. teach the digital recording system wherein the streaming object is embodied in firmware (col. 34, lines 59-52. Firmware is defined as the combination of a hardware device and computer instruction and data that reside as read-only software on that device according to The Authoritative Dictionary of IEEE Standards Terms seventh edition).

**Consider claim 19,** Kikuchi et al. teach a digital recording system, comprising: a video recorder for recording image data (42 of Fig. 39 and col. 27, lines 20-21); a first memory for receiving image data from the video recorder (34 of Fig. 39); a streaming object operative to monitor the first memory for storing the image data recorded by the video recorder (30 of Fig. 39), and to stream the image data from the first memory to a digital storage device after a streaming buffer delay (col. 34, lines 1-20).

**Consider claim 20,** Kikuchi et al. teach the digital recording system wherein the streaming buffer delay is a minimum number of image data blocks of image data stored in the first memory (col. 34, lines 1-20, the temporal storage is used to buffer predetermined amount of data. Therefore, if the predetermined amount of data is not buffered, the data will not be sent to the disc drive).

**Consider claim 22**, Kikuchi et al. teach the digital recording system wherein the first memory receives image data from the video recording during a streaming buffer delay (col. 34, lines 1-20).

**Consider claim 24**, Kikuchi et al. teach the digital recording system wherein the digital storage device is one of the group consisting of a compact disk (CD) storage device and a digital video disk (DVD) storage device (10 and 32 of Fig. 39).

**Consider claim 25**, Kikuchi et al. teach the digital recording system wherein the streaming object is embodied in software, firmware, or both (col. 34, lines 49-52).

**Consider claim 26**, Kikuchi et al. teach the digital recording system wherein the digital storage device is at least one of a network, a hard disk, or random access memory (col. 34, lines 6-16).

**Consider claim 27**, Kikuchi et al. teach the digital recording system wherein image data is stored in the first as data blocks of encoded video frame in an order received from the video recorder (Fig. 31 and col. 34, lines 1-20, the image data is received by the temporal storage as data blocks of the predetermined size that the temporal storage is able to hold).

**Consider claim 29**, Kikuchi et al. teach the digital recording system wherein the streaming object is operative to check available storage space in the digital storage device prior to streaming image data from the first memory to the digital storage device (Fig. 49 and Fig. 51).

**Consider claims 30 and 43**, Kikuchi et al. teach a method for producing digital image video comprising the steps of: recording image data by one or more recording



devices controlled by a video recorder object (col. 27, lines 20-21 and Fig. 31); storing recorded image data to a first memory (34 of Fig. 39); monitoring the first memory with a streaming object which also controls streaming the image data to a digital storage device (30 of Fig. 39); and writing the streaming image data to a recordable data storage medium in the digital storage device (10 and 32 of Fig. 39).

**Consider claims 31 and 44**, Kikuchi et al. teach the method further comprising the step of formatting recorded image data to a compressed digital format (56 of Fig. 39 formats the recorded image data to a compressed digital format).

**Consider claims 33 and 45**, Kikuchi et al. teach the method further comprising the step of waiting for a streaming buffer delay period before writing the image data to recordable data storage medium in the digital storage device (col. 34, lines 1-20).

**Consider claim 35**, Kikuchi et al. teach the method further comprising the step of sending visual and audible notification to a user if a problem is with the digital storage device is detected by the streaming object (Fig. 53).

**Consider claim 39**, Kikuchi et al. teach the method further comprising the step of verifying that there is enough free space available on the recordable data storage medium for saving image data (Fig. 49 and Fig. 51).

**Consider claim 40**, Kikuchi et al. teach the method further comprising the step of stopping recording image data when the recordable data storage medium in the digital storage device is filled to capacity (Fig. 49).

**Consider claim 41**, Kikuchi et al. teach the method further comprising the step of generating a notification when the recordable data storage medium in the recording device is full (Fig. 53).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 21, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Bopardikar et al. (US 6,404,975 B1).

**Consider claim 3**, Kikuchi et al. teach all the limitations in claim 1 but do not explicitly teach the digital recording system wherein initial image data received by the first memory from the video recorder is streamed to the digital storage device by the streaming object while subsequent acquired image data is received by the first memory from the video recorder.

Bopardikar et al. the digital recording system wherein initial image data received by the first memory from the video recorder is streamed to the digital storage device by the streaming object while subsequent acquired image data is received by the first memory from the video recorder (col. 15, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to stream the initial image data to the video recorder while receiving subsequent acquired image data to improve the efficiency of the recording system.

**Consider claim 21**, Bopardikar et al. further teach the digital recording system wherein the streaming object is operative to stream image data to the digital storage device while the first memory receives image data from the video recorder (col. 15, lines 60-65).

**Consider claim 42**, Bopardikar et al. teach the method further comprising the step of storing recorded image data to the first memory while streaming image data to the digital storage device (col. 15, lines 60-65).

5. Claims 2 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Okada et al. (US 6,181,870 B1).

**Consider claim 2**, Kikuchi et al. teach all the limitations in claim 1 but do not explicitly teach the digital recording system wherein image data is streamed to the digital storage device by the streaming object in the order in which the image data was received by the first memory.

Okada et al. teach the digital recording system wherein image data is streamed to the digital storage device by the streaming object in the order in which the image data was received by the first memory (col. 53, lines 18-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a FIFO buffer memory in the apparatus to compensate the variations in the incoming data and to read out data at a substantially constant rate.

**Consider claim 28**, Okada et al. teach the digital recording system wherein the streaming object streams image data to the digital storage device in an order in which the image data was stored in the first memory (col. 53, lines 18-21).

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claim 32 is  
6. ~~Claims 32~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Etoh et al. (US 6,625,211 B1).

**Consider claim 32**, Kikuchi et al. teach all the limitations in claim 30 but do not explicitly teach the method further comprising the step of transcoding the recorded image data from one compressed format to another.

Etoh et al. teach the method further comprising the step of transcoding the recorded image data from one compressed format to another (Fig. 15 and Fig. 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the step of transcoding the recorded image from one compressed format to another to enhance the compatibility of bit-stream between different coding systems.

7. Claims 34, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Hashimoto (US 6,639,877 B2).

**Consider claim 34**, Kikuchi et al. teach all the limitations in claim 30 but do not explicitly teach the method further comprising the step of verifying that the digital storage device includes a recordable data storage medium prior to streaming image data to the digital storage device.

Hashimoto teaches the method further comprising the step of verifying that the digital storage device includes a recordable data storage medium prior to streaming image data to the digital storage device (col. 4, lines 45-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

incorporate a step of verifying the digital storage device include a recordable data storage medium to ensure the streaming data can be recorded on the medium.

**Consider claim 36**, Hashimoto teaches the method further comprising the step of determining whether the recordable data storage medium is a compact disk (CD) or a digital video disk (DVD), and notifying a user accordingly (col. 4, lines 45-51).

**Consider claim 37**, Hashimoto teaches the method further comprising the step of formatting the recordable data storage medium (col. 4, lines 63-66).

**Consider claim 38**, Hashimoto teaches the method further comprising the step of determining a format state of the recordable data storage medium if the recordable data storage medium is determined to be a digital video disk (col. 4, lines 45-51 and col. 5, lines 20-25), and streaming image data if the recordable data storage medium is pre-formatted (col. 5, lines 20-25).

8. Claims 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Chow et al. (US 6,745,310 B2).

**Consider claim 13**, Kikuchi et al. teach all the limitations in claim 6 but do not explicitly teach the digital recording system wherein the hard disk has a minimum rotational speed of 7200 RPM and a minimum bus speed of 100 MByte per second.

Chow et al. teach the digital recording system wherein the hard disk has a minimum rotational speed of 7200 RPM and a minimum bus speed of 100 MByte per second (col. 21, lines 36-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a hard disk that has a minimum rotational speed of 7200 RPM and a minimum bus speed of 100 MByte per

second to facilitate a efficient recording of the video data received from the video recorder.

**Consider claim 23,** Chow et al. teach the digital recording system wherein the first memory is a hard disk having a minimum rotational speed of 7200 RPM and a minimum bus speed of 100 MByte per second, and image data is stored as an encoded video file on the hard disk (col. 21, lines 36-44).

9. Claims 46, 48, 49, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Byrd et al. (US 6,633,328 B1).

**Consider claim 46,** Kikuchi et al. teach a system for capturing a digital record of a surgical procedure the system comprising: a video recorder for recording digital image information (42 of Fig. 39 and col. 27, lines 20-21); a video recorder object for controlling digital image data acquisition functions of the video recorder (30 of Fig. 39); a first memory operative to receive and hold the digital image information recorded by the video recorder (34 of Fig. 39), and a streaming object which controls transfer of the digital image information from the first memory to a digital storage device (30 of Fig. 39). However, Kikuchi et al. do not explicitly teach that the system is for capturing a digital record of a surgical procedure.

Byrd et al. teach an apparatus for displaying and recording live videographic images of a surgical procedure (col. 1, lines 6-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to record

live videographic images of a surgical procedure for use afterwards as a teaching tool or in defense of medical malpractice lawsuits.

**Consider claim 48**, Kikuchi et al. teach the system operative to stream digital image data to the digital storage device from the first memory while additional digital image data is received by the first memory (col. 34, lines 1-20).

**Consider claim 49**, Kikuchi et al. teach the system operative to receive additional digital image information in the first memory during a streaming buffer delay controlled by the streaming object (col. 34, lines 1-20).

**Consider claim 51**, Kikuchi et al. teach the system wherein the first memory is a computer hard disk (col. 34, lines 13-14).

**Consider claim 52**, Kikuchi et al. teach the system wherein the digital storage device comprises optically recordable storage medium for producing a digital record of a surgical procedure (10 of Fig. 39).

10. Claims 47 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,553,180 B1) in view of Byrd et al. (US 6,633,328 B1) as applied to claim 46 above, and further in view of Bopardikar et al. (US 6,404,975 B1).

**Consider claim 47**, Kikuchi et al. and Byrd et al. teach all the limitations in claim 46 but do not explicitly teach the system operative to stream digital image data to the digital storage device from the first memory while additional digital image data is received by the first memory.

Bopardikar et al. teach the system operative to stream digital image data to the digital storage device from the first memory while additional digital image data is

received by the first memory (col. 15, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to stream the initial image data to the video recorder while receiving subsequent acquired image data to improve the efficiency of the recording system.

**Consider claim 50**, Bopardikar et al. further teach the system operative to receive additional digital image information in the first memory while previous digital image information received and held by the first memory is transferred to the digital storage device by the streaming object (col. 15, lines 60-65).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tat Chi Chio whose telephone number is (571) 272-9563. The examiner can normally be reached on Monday - Thursday 8:30 AM-6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571)-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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TCC

  
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